Tree Shelters . . . Are They For You?

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A few short years ago landowners were talking about an oak tree that would produce acorns in five years to ten years, depending on who was telling the story. Excited property owners were calling nurseries, governmental foresters, consulting foresters . . . any source where they thought they might get some of these "magic oaks." As time passed, the sawtooth oak became easier to acquire. Numerous land managers took seedlings to the field and planted them in a variety of schemes and locations. Landowners waited a few years and were disheartened to see that their "magic oaks" didn't produce acorns in the anticipated time frame. A short study of the situation told us that the trees had been planted and forgotten, similar to the mindset of planting pines.

Maintaining a healthy stand of sawtooth oaks is more difficult than simply planting the stand. Hazards facing the newly planted trees include — but are not limited to — plant competition, browse by deer, mice, rabbits, herbicide drifts, insects, etc. If only there were a product that could protect the seedling and accelerate the growth rate. Well, there is . . . it's called the Tree Tube, Tree Shelter, and/or Tree Protector. If properly used, tree shelters will increase growth and survival while protecting the seedlings from numerous pests.

First used in England, tree shelters have now become a common silvicultural tool used around the world. The principle is simple: provide a shield to keep animals and wind out, while allowing light and moisture in. As the tree develops leaves, it forms a canopy inside the shelter, trapping moisture.

When using a tree shelter, you should choose the species of seedlings you are going to use and determine the environmental conditions that may threaten them. For example, hardwoods that are exposed to heavy deer browsing require a four- to five-foot solid wall shelter. The most common causes of seedling loss are animal browsing, wind damage, weed and grass competition, chemical sprays, and drought. Tree shelters have been proven to be very effective in preventing these problems.

Growth is accelerated and survival is increased by using tree shelters.

Any tree shelter used in forestry requires a flared top to prevent bark abrasion as the tree grows from the shelter and begins to rub up against the top of the shelter. Most shelters are designed to degrade after five to seven years. However, they may break down differently depending on the weather and light conditions on your property. Top quality shelters have a laser line that allows the shelter to split if the trunk outgrows the diameter of the shelter. This prevents the shelter from girdling and killing the tree.

Research has shown that seedlings grown in tree shelters have the highest survival rate and increased growth rates, averaging 100-150 percent, with certain species exceeding 500 percent. A seedling with enhanced early growth will always be ahead of a plant of the same age that does not have the growth advantage provided by a tree shelter.

How does a tree shelter provide this enhanced early growth? It provides a beneficial micro-climate for the seedling. A tree shelter pro-

Growth rate is different among trees, as shown here within an approximate 1/10th acre plot. Look closely to see twelve tree tubes in the photo above. Some seedlings have grown above the 4-1/2 foot tube, even with heavy grass competition.

vides increased humidity, higher carbon dioxide levels, reduced drying and mechanical damage caused by wind, and it also reduces harmful ultraviolet light.

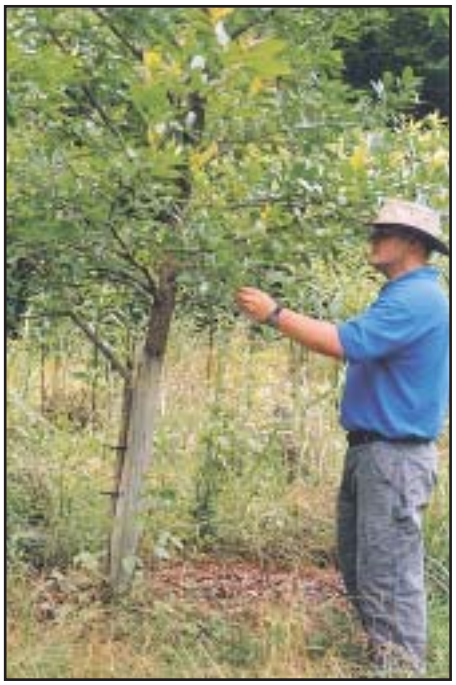
I *(Alan)* first used tree shelters approximately seven years ago. The results were hard to believe. I assisted a friend of mine, a landowner in Coosa County, with the establishment of two "wildlife orchards." My friend wanted to plant something beneficial to wildlife on two logging decks used during a recent logging operation on his property. As is common with logging decks on piedmont soils, the soil was compacted by the logging equipment. Both of these logging decks were approximately half an acre in size. We planted about 50 trees on each site for a total of 100 trees: a combination of sawtooth oaks, crabapple, Chinese chestnuts, and hybrid chestnuts. The containerized seedlings were planted during March. Tree shelters, 48 inches high, were installed at the time of planting. In November of the same year both of these wildlife orchards were included on the annual Coosa County TREASURE Forest Landowners Tour. The amazing thing was that on a site with soil compaction and poor site index for hardwoods, most of the seedlings had grown up to or over the tops of the tree tubes. The record was a crabapple with a height of seven feet. This example shows how beneficial tree shelters can be.

Other examples come to mind. A stop on a TREASURE Forest tour in Elmore County also illustrated the benefits of tree shelters. The landowner had planted two adjacent rows of sawtooth oaks in an old cotton field. One row had been planted and left to grow on its own; the second row had tree shelters installed at the time of planting. After approximately five years, the sawtooth oaks without the tree shelters were 3 to 5 feet tall, while those with the tree shelters were 15 to 20 feet tall.

In some counties, tree shelters may be obtained from local nurseries. The Coosa and Elmore County Planning Committees offer the shelters (when available) to local landowners for less than $3.00 each. They may also be obtained from TREESENTIALS at 1-800-284-8239 and TUBEX at 1-800-538-TREE. Prices of tree shelters vary depending on height, manufacturer, quantity, etc. The price range is usually between $1.50 and $6.00 per tube. Purchase a few from different sources and pick the one that best fits your needs.

In conclusion, we believe tree shelters are a necessity when planting certain hardwood seedlings. The increased growth and survival more than offset the cost of the shelters. If the aforementioned factors are important to you . . . USE A TREE SHELTER.

For more information contact your local Co-Operative Extension System office, Alabama Forestry Commission county manager, or a Department of Conservation and Natural Resources wildlife biologist.



Wildlife Biologist Brian Walker inspects healthy four-year-old sawtooth oak. The manufacturer recommends removal of tree shelters only after the plastic begins to crack or degrade.

Some landowners prefer the use of metal over wooden support stakes, as the wood generally tends to rot within a year.